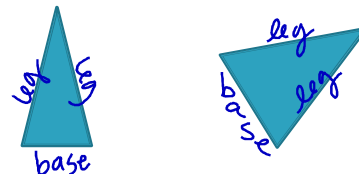


Isosceles Triangle Theorems

October 8, 2008

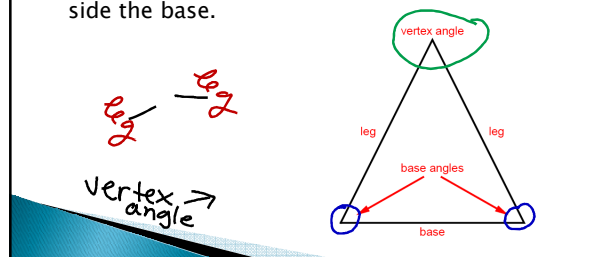
What is an isosceles triangle?

- As we discussed in a previous section isosceles triangles are triangles with at least two sides congruent.
- The two congruent sides are called legs and the third side is called the base



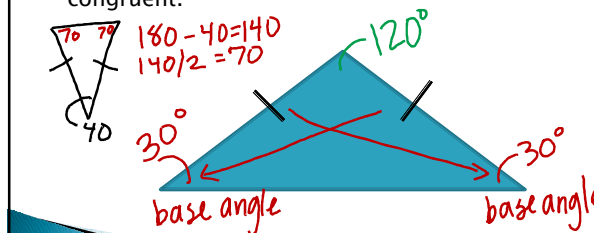
Examining the parts of an isosceles triangle

- Note: Since an equilateral triangle, by definition, is also isosceles then any two sides can be referred to as the legs and the third side the base.



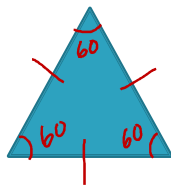
The Isosceles Triangle Theorem

- If two sides of one triangle are congruent, then the angles opposite those sides are congruent.



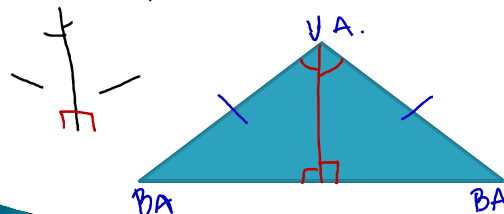
Corollaries 1 and 2

- Corollary 1: An equilateral triangle is also equiangular.
- Corollary 2: An equilateral triangle has three 60° angles.



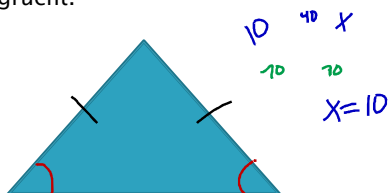
Corollary 3

- The bisector of the vertex angle of an isosceles triangle is perpendicular to the base at its midpoint.



Converse of the Isosceles Triangle Theorem

- If two angles of a triangle are congruent, then the sides opposite those angles are congruent.



Corollary

- An equiangular triangle is also equilateral.

angles = sides =

